

IN THE CLAIMS:

Please cancel claims 1-10, amend claims 11 and 12 and add new claim 13 as follows:

1-10 (Cancelled)

11. (Currently Amended) A method for analyzing nucleic acids using an insulated gate field effect transistor on which a biomolecular probe is immobilized as a [[the]] biomolecule detecting element ~~according to any one of claims 1 to 10~~, comprising the steps of:

immobilizing a single-stranded nucleic acid probe on said biomolecule detecting element ~~probe-immobilized electrode~~ as said biomolecular probe;

introducing a sample solution containing at least one kind of nucleic acid onto said biomolecule detecting element and carrying out hybridization with said single-stranded nucleic acid probe;

introducing a washing solution onto said biomolecule detecting element and removing unreacted nucleic acid on said biomolecule detecting element;

introducing an intercalator solution onto said biomolecule detecting element and causing it to react with the nucleic acid that has become double-stranded;

introducing a washing solution onto said biomolecule detecting element and removing unreacted intercalator on said biomolecule detecting element; and

introducing a buffer solution onto said biomolecule detecting element and measuring output values of said insulated gate field effect transistor.

12. (Currently Amended) A method for analyzing ~~biomolecules~~ nucleic acids using [[the]] a biomolecule detecting element ~~according to claim 10~~, comprising an insulated gate field effect transistor on which a biomolecular probe is immobilized, a transmission/reception antenna, a reception circuit, and a transmission circuit, comprising the steps of:

putting a plurality of biomolecule detecting elements ~~comprising said probe-immobilized electrodes~~ having different kinds of single-stranded nucleic acid probes immobilized thereon as said biomolecular probe[[s]], and a buffer solution in a reaction vessel, and receiving a signal from each of said biomolecule detecting elements using an external receiver;

introducing a sample solution containing at least one kind of nucleic acid into

said reaction vessel and carrying out hybridization with said single-stranded nucleic acid probe;

introducing an intercalator solution into said reaction vessel and causing it to react with the nucleic acid that has become double-stranded; and

receiving a signal from each of said biomolecule detecting elements using ~~[[the]]~~ an external receiver.

13. (New) The method for analyzing nucleic acid according to claim 12, wherein said biomolecule detecting element comprises a memory circuit for storing identification information, and wherein the signal from said biomolecule detecting element includes an output value of said insulated gate field effect transistor in said biomolecule detecting element, and identification information stored in said memory circuit.